INTRODUCTORY NOTES

Several years ago the Support School purchased the film series, "Motivation and Productivity," created by Dr. Saul W. Gellerman. These films feature a number of well-known behavioral scientists discussing some of the findings of research into the relationship between motivation and productivity, and exploring some of the more intriguing current theories. The series has been used in our management training courses and has been shown, in whole or in part, to other audiences in the Agency.

We recently purchased Dr. Gellerman's new film series, "The Effective Organization," dealing with the ways in which several corporations (AT&T, Texas Instruments, and TRW among them) have applied some of the ideas of the behavioral scientists. We think that both sets of films are excellent for stimulating thought and encouraging experimentation in the interest of improving organizational effectiveness and employee satisfaction.

On 28 March you will see two films. "Motivation in Perspective" is the summary film of the "Motivation and Productivity" series, and "Assessing Management Potential" is the first film in the "Effective Organization" series. Other films will be shown on later dates.

In this folder you will find summaries of the films in both series and brief biographies of the people you will see on film. We hope that this material will serve to refresh your memory and provide a common point of reference for all.

Background Information on Gellerman Series:

"MOTIVATION AND PRODUCTIVITY"

THE GELLERMAN MOTIVATION AND PRODUCTIVITY FILM SERIES

INTRODUCTION

Ever since the famous Hawthorne Studies at the Western Electric Company in the late 20's and early 30's, many managers have had an uneasy feeling that there may be things that the behavioral scientists are discovering which they ought to know about. But these findings upset many cherished and traditional methods of management, and myths about how people behave in organizations. Besides, it has been relatively easy for managers to ignore the things that behavioral scientists are saying, because American business enterprise has enjoyed tremendous success. We are the envy of the rest of the world, and "you can't quarrel with success".

Lately, however, there has been renewed interest in human motivation and behavior in organizations, simply because we seem to have come almost to the outer limits of offering more money, fringe benefits, security and other things which have traditionally been considered motivators. There is a growing interest on the part of management as to whether there are principles and techniques which behavioral science has discovered which can be applied to increase productivity and profit in an organization.

* * * *

Behavioral science--which comprises psychology, sociology, anthropology and many of the specialized branches of these disciplines, including social psychology, industrial anthropology, etc. etc. --has been moving in two directions in the last few decades. One direction involves research on the types of management behavior which seems to lead to more productive and more profitable operation. If behavioral science can identify some of the techniques being used by <u>successful</u> managers (and if these techniques seem to be rather different than traditional management techniques) they warrant serious consideration by all managers to see whether or not these techniques should be applied in their own organizations.

The other direction in which behavioral science is moving involves experiments to see whether the application of the findings from the more successful managers can be applied in different situations, different settings, and different industries and occupations.

What are the behavioral scientists saying to management? The common thread that runs through all behavioral science reports seems to be this: You are not using employees at their full capacity. You've designed jobs to take advantage of only the minimum performance human beings are capable of. You're appealing to basic needs to motivate employees, rather than higher human psychological needs.

The result is that management finds itself in a position of having to give more and more in the way of economic incentives to accomplish less and less in terms of productivity. So we hear that employees are lazy, they always want more, "they're disloyal", they cannot be motivated. This judgment is based on subordinates' behavior, and in many cases, it is probably correct.

But behavioral science says that people behave this way in organizations because that's the way they're expected to behave, that's the way jobs are designed, that's the way policies, procedures and traditions have taught both managers and subordinates how to behave.

Is it, after all, so surprising to learn that subordinates, even rank-and-file employees, want challenging, rewarding, meaningful assignments? Isn't that the way <u>you</u> are motivated?

MOTIVATION THROUGH JOB ENRICHMENT

FREDERICK HERZBERG: BIOGRAPHY

Frederick Herzberg is Professor of Psychology at Case Western Reserve University in Cleveland and Lecturer in Preventative Medicine at the University of Oklahoma. A graduate of the City College of New York (B.S.S.), the University of Pittsburgh (M.S., Ph.D.) and the Pittsburgh Graduate School of Public Health (M.P.H.), he was the recipient of a Fulbright Fellowship to Finland in 1964.

Currently a consultant for the American Institute of Research, the Veterans Administration, and numerous industrial, educational, and government organizations, Dr. Herzberg is the author of THE MOTIVATION TO WORK and WORK AND THE NATURE OF MAN.

SUMMARY OF FILM

1. Man has two different sets of needs, says Herzberg. Out of that seemingly simple observation has come both a new insight into the nature of work motivation, and a valuable new strategy for increasing employee productivity.

The classical approach to motivation, according to Herzberg, has concerned itself only with the environment in which the employee works: that is, the circumstances that surround him while he works and the things he is given in exchange for his work. Herzberg considers this concern with the environment a never-ending necessity for management, but says it is not sufficient in itself for effective motivation. That requires consideration of another set of factors; namely, experiences that are inherent in the work itself.

Herzberg's assertion that work itself can be a motivator represents an important behavioral science breakthrough. Traditionally, of course, work has been regarded as an unpleasant necessity, rather than as a potential motivator. For this reason, it has generally been considered necessary for management to entice people to work by means of various rewards, or to coerce

them to work by means of various threats, or both. According to Herzberg, the potential motivating power of work was obscured by the fact that most jobs were not at all stimulating, and therefore some kind of external pressure, either positive or negative, had to be applied to get people to do them. Indeed, many jobs today still have this characteristic. But when a job provides an opportunity for personal satisfaction or growth, a powerful new motivating force is introduced.

Herzberg holds that there is no conflict between the environmental approach to motivation and the approach through work itself. He regards both as important. However, the environmental approach, which he refers to as hygiene, is inherently limited in its capacity to influence employee behavior; while the approach through the job, which he refers to as motivation, seems to be capable of larger and more lasting effects.

2. Herzberg uses the term hygiene to describe such things as physical working conditions, supervisory policies, the climate of labor-management relations, wages and various "fringe" benefits. In other words, hygiene includes all the various "bread-and-butter" factors through which management has traditionally sought to affect motivation. Herzberg chose the term "hygiene" to describe these factors because they are essentially preventive actions taken to remove sources of dissatisfaction from the environment, just as sanitation removes potential threats to health from the physical environment. His research has shown that when any of these factors are deficient, employees are quite likely to be displeased and to express their displeasure in ways that hamper the organization--for example, through grievances, decreased productivity or even strikes. But when the deficiencies are corrected, productivity may return to normal, but is unlikely to rise above that level.

In other words, an investment in hygiene may eliminate a deficit, but it does not create a gain. Further, it is inherent in the nature of hygiene needs that satisfactions are not lasting, and that with the passage of time a feeling of deficiency recurs. Just as eating a meal does not prevent a man from becoming hungry again in the future, a wage increase will not prevent him from becoming dissatisfied eventually with his new wage level. Hygiene, according to Herzberg, is a necessary but thankless task for management. There can be no end to it, since inadequate hygiene will surely lead to inefficiency. But even a fully effective hygiene program will not, according to Herzberg, motivate employees to sustain a higher-than-usual level of efficiency.

Herzberg uses the term <u>motivation</u> to describe feelings of accomplishment, of professional growth and professional recognition, that are experienced in a job that offers sufficient challenge and scope to the worker. He chose this term because these factors seem capable of producing a lasting increase in satisfaction, and with it an increase in productivity above "normal" levels. This has been found to be true in a wide variety of jobs and organizational settings. (It is important to note that Herzberg uses the term "motivation" in a restricted sense. He applied it only to the kinds of experiences that produce sustained satisfactions, and does not use the term in its more general sense which includes influences that have less lasting effects.)

Herzberg's analysis focuses attention on job design. In most cases, jobs were either not consciously "designed" at all, or were designed primarily from the standpoint of efficiency and economy. To the extent that these steps have taken the challenge and opportunity for creativity out of a job, they have probably contributed to a de-motivating effect. That is, Herzberg considers that apathy and minimum effort are the natural results of jobs that offer the worker no more satisfaction than a paycheck and a decent place to work. These hygiene factors may keep him from complaining, but they will not make him want to work harder or more efficiently. Offering still more hygiene, in the form of prizes or incentive payments, produces only a temporary effect. According to Herzberg, investments in hygiene reach the point of diminishing returns rapidly and do not, therefore, represent a sound motivational strategy.

3. Herzberg has been experimenting with what he calls "job enrichment" as a means of introducing more effective motivation into jobs. He draws a clear distinction between job enrichment--the deliberate enlargement of responsibility, scope and challenge--and job rotation, the movement of an individual from job to job without necessarily increasing responsibility at all. Herzberg has found job rotation unsatisfactory as a motivating tool, but has achieved impressive results with job enrichment. After an initial "adjustment" period, during which productivity temporarily declines, efficiency tends to rise well above previous levels--and more importantly, it stays high. At the same time, employee satisfaction with the job reaches very high levels.

Herzberg regards money (and various money substitutes, such as "fringe" benefits) to be a hygiene factor. His studies have shown that most people are not strongly affected by their incomes except when they consider them inadequate - in which case they will be dissatisfied, and will take whatever steps they can to correct the situation. This might include working harder, if they thought that would have a reasonably prompt effect on their incomes, or working less effectively, if they felt that management was unresponsive to any other kind of pressure. The important point, according to Herzberg, is that the positive effect on effort is likely to be brief: the individual will either get his increase, thereby eliminating the incentive for the extra effort, or he will decide that the extra effort was futile and will revert to a normal working pace. Further, satisfaction with a monetary increase does not last long, and in time a new feeling of inequity will set in if new wage increases are not forthcoming.

These observations lead Herzberg to conclude that the principal effect of money is to create dissatisfaction (when pay is perceived as inequitable), and that the principal effect of pay increases is to remove dissatisfaction, not to create satisfaction. Therefore, careful attention to wage and salary is an absolute "must" for management, but it should recognize that it is only performing a hygiene function and cannot expect this to be sufficient in itself for the attainment of effective motivation.

THE SELF-MOTIVATED ACHIEVER

DAVID C. McCLELLAND: BIOGRAPHY

David C. McClelland is Professor, Department of Social Relations, Harvard University. He is currently president, New England Psychological Association, director of research on achievement motivation and economic development under grants from the Ford Foundation, Carnegie Foundation, State Department, National Institute of Mental Health, Peace Corps, etc. He received his A. B. from Wesleyan University, his A. M. from University of Missouri, and his Ph. D. (Psychology) from Yale University, 1941. Author of numerous books and articles, his principal works are: THE ACHIEVING SOCIETY, 1961; and THE ROOTS OF CONSCIOUSNESS, 1964.

SUMMARY OF FILM

1. Nearly everyone feels that he has an "achievement motive". But according to McClelland, who has been studying this motive ever since World War II, only about 10% of the U.S. population is strongly motivated for achievement. That is a fairly high figure when compared to most other countries--high enough, according to McClelland, to have powered the U.S. drive to a pre-eminent position in the world economy. Still, that figure is surprisingly low to many Americans, who are taught to think of themselves as a nation of achievers.

Part of the explanation is that McClelland gives the term "achievement motive" a precise technical definition. According to McClelland, the most convincing sign of a strong achievement motive is the tendency of a person who is not being required to think about anything in particular--that is, when he is free to relax and let his mind just "idle", as it were--to think about ways to accomplish something difficult and significant. This tendency is measurable by means of special psychological techniques.

A second characteristic of the achievement motive reveals its importance to management. Although only about 10% of the people in the population at large have a strong achievement motive, the percentage in certain occupations is likely to be much higher. This is especially true of sales and marketing positions, managerial positions of all kinds, and independent businessmen. Further, a man with a strong achievement motive is likely to surpass the accomplishments of an equally able but less strongly motivated man--especially in one of these occupations.

2. McClelland's studies have identified three major characteristics of the self-motivated achiever. These are "strategies" which the achiever tends to follow throughout life, beginning at a surprisingly early age. They help to explain why he is likely to be successful; and they also indicate why supervisory tactics which may be appropriate for other kinds of people are often inappropriate when applied to the man with a strong achievement motive.

First, achievers like to set their own goals. They are nearly always trying to accomplish <u>something</u>. They are seldom content to just drift aimlessly and let life "happen to them". Further, they are quite selective about which goals they commit themselves to, and for this reason they are unlikely to automatically accept goals which other people--including their supervisors--select for them. Neither do they seek advice or help, except from experts or people who can provide needed skills or information. The achiever prefers to be as fully responsible for the attainment of his goal as possible. If he wins, he wants the credit, and if he loses he accepts the blame. Either way, he wants the victory or the defeat to be unmistakably his.

Second, the achiever tends to avoid the extremes of difficulty in selecting goals. He prefers moderate goals that are neither so easy that winning them would provide no satisfaction, nor so difficult that winning them would be more a matter of luck than ability. He gauges what is possible, and then selects a goal that is as tough as he thinks he can make--the hardest <u>practical</u> challenge. This attitude keeps him continually straining his abilities to their realistic limits, but no further. Above all else, he wants to win; and therefore, he does not knowingly commit himself to a goal that is probably too difficult to achieve.

Third, the achiever prefers tasks which provide him with more or less immediate "feedback"; that is, measurements of how well he is progressing toward his goal. Because of the importance of the goal to him, he likes to know how well he is doing at all times. This is one reason why achievers often decide upon a career in sales. The salesman gets much more rapid feedback than people in most other occupations about the effectiveness of his efforts: He either makes the sale or he doesn't.

3. McClelland points out that the effect of a monetary incentive on an achiever is actually rather complex. On the one hand, achievers usually have a fairly high opinion of the value of their services, and prefer to place a fairly high price tag on them. They are unlikely to remain for long in an organization that does not pay them well. On the other hand, it is questionable whether an incentive payment actually increases their output, since they are normally working at peak efficiency anyway.

McClelland notes that monetary incentives are actually more effective with people whose achievement drives are relatively weak--since they need some kind of external reward to increase their effort level--than with the achiever, whose drive is largely internal. Provided he feels that he is being equitably paid, the main significance of additional income for the achiever is as a form of feedback: a way of measuring his success.

McClelland emphasizes that the achievement motive, as he defines it, is not the only source of high achievement. Other drives can also lead to high levels of attainment in other occupations. But in the world of business, achievers have a considerable advantage. This raises the question of whether the level of achievement motivation could be increased in people whose achievement drives are not unusually strong. McClelland believes that this may be possible; and indeed, that there are considerable "reserves" of latent, untapped achievement motivation in most organizations. The key, he feels, is to build more "achievement characteristics" into more jobs: personal responsibility, individual participation in the selection of productivity targets, moderate goals, and fast, clearcut feedback on the results each individual is attaining.

For achievers themselves, McClelland believes that many standard supervisory practices are inappropriate, and in some cases may even hinder their performance. Work goals should not be imposed on the achiever: he not only wants a voice in setting his own quotas, but he is unlikely to set them lower than he thinks he can reach. Highly specific directions and controls are unnecessary: some general guidance and occasional follow-up will do. But if the job does not provide its own internal feedback mechanism regarding the achiever's effectiveness--if he is, for example, in a professional or administrative job--then it is vitally important to the achiever that he be given frank, detailed appraisals of how well he is performing his job.

Approved For Release 2003/05/27 : CIA-RDP84-00780R005000020039-5

UNDERSTANDING MOTIVATION

SAUL W. GELLERMAN: BIOGRAPHY

Dr. Saul W. Gellerman is President of Gellerman Kay Corp., a management consulting firm in Harrington Park, N. J. Previously he was Executive Research Consultant for International Business Machines Corporation, and Manager of Personnel Research for IBM World Trade Corporation.

He is a graduate of the University of Missouri (B. A. 1949, M. A. 1950) and the University of Pennsylvania (Ph. D. 1956).

Dr. Gellerman is the author of MANAGEMENT BY MOTIVATION, 1968; MANAGEMENT OF HUMAN RELATIONS, 1966; MOTIVATION AND PRODUCTIVITY, 1963; PEOPLE, PROBLEMS AND PROFITS, 1960.

SUMMARY OF FILM

1. Modern management is being reshaped by scientific and technical developments. Among these are such disciplines as Operations Research, Computer Mathematics and Behavioral Science. In this film, Gellerman defines behavioral science, reviews its relatively brief history, and shows how it is being applied to practical management problems.

According to Gellerman, behavioral science is the systematic measurement of worker attitudes and actions, and of factors in the environment that can affect them. These studies are based as much as possible on repeatable measurements: that is, they are independent of the opinions of the researcher himself. The basic strategy of behavioral science is to question the assumptions on which managerial practices are based and to test them against reality. The behavioral scientist is, in other words, a professional skeptic. According to Gellerman, this skepticism has already paid off significantly for managers and behavioral scientists alike. In addition to providing new theoretical insights, behavioral science has proven its worth as a management tool.

An organization's employees--that is, the human assets through which the enterprise seeks to get its work done--are nearly always a significant cost factor. When they are motivated to be cooperative and creative, they can also be a significant profit factor. However, most experienced managers would agree with Gellerman that this happens all too rarely. But Gellerman asserts that there is nothing inevitable about the lack of effective work motivation. It is often the unintended result of management practices that are either antiquated or unrealistic.

While a number of issues in behavioral science remain to be resolved, Gellerman says that there are enough consistencies in behavioral research findings to permit some useful generalizations. One of these is that many "motivational problems" are more likely to result from the way an organization is managed than from a simple unwillingness on the part of employees to work hard. Another generalization is that modern management has a tendency to over-manage--that is, to define the employee's job too narrowly and to make too many decisions for him. Another is that if you want to understand the reasons why an employee behaves as he does, you have to learn to look at his environment the way he does. Conclusions like these emerge from many behavioral research studies that have been completed in a wide variety of industries. They are evidently not peculiar to any particular industry, geographic region or type of job.

2. One reason why managerial practices are often antiquated, says Gellerman, is that the environment of most working people has been changing rapidly. Today's employee is typically much better educated, more in demand and therefore more independent, than the typical worker of only a generation ago. But management practices have not always kept pace with these changes. Consequently, motivational methods which may have worked well enough a generation ago are increasingly ineffective today. Neither the threat of losing a job nor the attraction of more money are enough, in today's environment, to assure effective motivation.

To explain why changes in the environment affect employee motivation, Gellerman cites a frequent finding of behavioral scientists: that nearly everyone regards his own behavior as sensible and justifiable. In other words, people are always behaving in ways that make sense to

them, based on their understanding of the circumstances on which they find themselves. Of course, that same behavior may seem quite irrational to someone else. According to Gellerman, the difference probably lies in the fact that they aren't making the same assumptions about those circumstances.

In particular, managers are likely to have attitudes toward their environments (which usually seem full of challenges and opportunities) that are quite different from the attitudes employees have toward their environments (which are more likely to seem rather dull and unstimulating). To occupy the same physical environment is not necessarily to see it the same way or to share the same attitudes toward it. According to Gellerman, this difference has led to a great deal of misunderstanding on both sides. Unfortunately, it has also led to motivational strategies which may have looked sound enough to managers, but did not have the desired effect on employees--simply because they looked at it in an entirely different light.

3. Motivation is not simply a matter of things that a manager does to influence his subordinates. It is much more complex than that. People are motivated not so much by what other people want them to do as by their own desire to get along as best they can in the kind of world they think they are living in. Gellerman calls this the "principle of psychological advantage". Basically, it means that people will tend to seek whatever values they consider important to the extent that they believe it is safe and possible for them to do so.

To most employees, the manager (and indeed, the organization as a whole) is simply a part of his over-all environment, and not necessarily the most important part. He will make concessions to his manager to the extent that he thinks he must, but he will not necessarily consider it advantageous to do more than that unless--and this is a big "unless"--it appears that doing so will lead to a lasting, significant gain. That "gain" is not necessarily monetary. It often has more to do with a change in the "role" the individual can play (that is, the kind of activity and the degree of self-management expected of him) than with money itself.

Gellerman notes that all people are motivated, and that most of the things that management does have a motivational effect. The problem is that too often people are motivated to act in ways which are unproductive. This is usually because they see no advantage in increasing their productivity, or because they are actually motivated to thwart the organization if they can.

Restriction of output can occur even in the face of incentive payments, simply because the employees regard the incentive as a bad bargain. They don't expect it to be a lasting advantage, and even if it were, it brings the risk of lasting disadvantages (the hostility of fellow workers) which would more than offset the gains. Underlying these attitudes is a basic conviction that management regards the employee solely as a cost factor to be minimized; and that consequently management's actions toward employees are likely to be against their real interests regardless of how attractively they may be packaged. Gellerman notes that situations of this kind are very difficult to deal with effectively. The root cause is the employee's perception of the way management perceives him. Changing this requires time, patience, and above all, a genuine willingness to deal with employees as individuals.

According to Gellerman, the role of money in motivation must be seen in its true perspective relative to other motivations. Money is neither all-important, as some management theorists have assumed, nor unimportant, as some oversimplified versions of behavioral science have implied. The effect of a possible monetary gain on an individual's behavior depends on his financial status, and more broadly on the psychological meaning of money for him. Money is an effective motivating tool when financial needs are strong and/or when money can serve some important psychological purpose for the individual. It does not tend to be effective when financial needs are not strong, or when money does not have an important psychological value. In the case of restriction of output, a potential monetary gain is often incapable of changing behavior even when there is financial need, because it conflicts with a still stronger psychological value (acceptance by one's fellow employees).

4. Gellerman stresses that behavioral science has not revealed a simple list of "do's and don'ts" for managers. On the contrary, it has revealed that the process of management is much too complex to be handled effectively by approaches that require no analysis or creativity on the part of the manager. What behavioral science does offer is a strategy for analyzing motivational problems, and some clues as to the general causes of common problems. It is up to the individual manager to diagnose the specific problems that he is confronted with, and to take action that is addressed to root causes and not merely to symptoms.

Gellerman lists three broad prescriptions which have often been found to have a positive motivational effect. They will not necessarily be effective in all cases, and should therefore be used selectively. One is what he refers to as "stretching"; that is, the deliberate assignment of duties that are somewhat more demanding (in difficulty level, not necessarily in terms of time or effort) than the manager himself thinks the employee can handle. This enhances the likelihood that the employee will experience the satisfaction of achievement, and develop a desire for more of it. Another prescription cited by Gellerman is "management by objectives"; that is, giving the employee rather broad discretion over the details of how his work is to be handled, provided he reaches certain precisely defined targets and stays within prescribed cost limits. This is likely to increase the employee's commitment to his work, because the results he achieves become more of a measurement of his abilities than of his manager's. Gellerman also advocates "participation", which is a general strategy of seeking employee comments and suggestions prior to taking significant decisions affecting their work. Even if their suggestions are not accepted, the fact of their having been consulted makes management decisions more understandable to the employees, and therefore, less likely to be misinterpreted.

Approved For Release 2003/05/27 : CIA-RDP84-00780R005000020039-5

THEORY X AND THEORY Y

The Work of Douglas McGregor

BIOGRAPHICAL NOTES

DOUGLAS McGREGOR was one of those rare men, who, somehow, was able to see farther into the future than the rest of us -- a man whose impact upon management has probably been more profound, more far-reaching than that of any behavioral scientist of his time. He died in October, 1964 at the age of 58. He was then Professor of Industrial Management at the Massachusetts Institute of Technology. McGregor was more than a behavioral scientist. He was also a top-level executive and a management consultant to several major companies. So, obviously, he had his practical side. Still, McGregor insisted on the importance of intangibles to management. He once said that every managerial act rests on a theory. And he said that the critical difference between effective leadership and ineffective leadership in industry did not lie in a company's policies or procedures; neither did it lie in the personal style of an individual manager, but rather it could be found in that manager's assumptions -- in the subtle, frequently unconscious effects of those assumptions about the nature of management and about people in general.

WARREN BENNIS is academic vice president, State University of New York at Buffalo.

RICHARD BECKHARD is consultant and senior lecturer in Organizational Behavior, Sloan School of Management at MIT.

JOHN PAUL JONES is vice president of organization development, Federated Department Stores, Incorporated.

SUMMARY OF FILMS

(NOTE: This summary covers both McGregor films - Part I - Description of the Theory, and Part II - Application of the Theory.)

Douglas McGregor, who died in 1964, is generally credited with being one of the most influential behavioral scientists of our times. His work is widely respected by behavioral scientists and managers alike. McGregor was not so much a researcher as an

interpreter and clarifier of the research that other men had carried out. His major contribution was in recognizing the importance to management of behavioral research findings, and explaining the practical implications of these findings to managers. He was the first man to successfully bridge the gap between laboratory research and managerial applications, and in that sense his work is fundamental to an understanding of modern behavioral science.

These two films deal primarily with McGregor's best known contribution, Theory X and Theory Y. While on the surface this distinction between two contrasting sets of assumptions about human nature is disarmingly simple, the reasoning behind it is actually quite subtle. For this reason, there has sometimes been a tendency to oversimplify what McGregor had in mind. Those who knew McGregor well say that this tendency was rather disturbing to him, and that one of his reasons for writing his last book (The Professional Manager, McGraw Hill, 1967) was to clarify and refine his ideas on the subject.

Actually, Theory X and Theory Y have been the subject of a number of interpretations, and as research data and experience accumulates there have been attempts to restate the theory more precisely. In the films, the discussion between the various principals reveals their attempts to phrase the essence of McGregor's ideas in ways that are consistent with their own developing experience in working with them.

In Theory X and Theory Y, McGregor was basically trying to account for certain aspects of human behavior, especially that behavior which resulted from attempts to deliberately influence it. As Warren Bennis points out in the film, the two theories are essentially statements of how one person's influence on another person's behavior is believed to take place. McGregor stressed the fact that most attempts to influence other people's behavior are actually based on a set of assumptions which are seldom tested or even recognized as assumptions. That is, most people act as if their underlying beliefs about human nature were correct and required no particular review or checking.

Because our behavior tends to be consistent with our assumptions, our overt attempts to influence other people usually include some indications (usually subtle, and not necessarily noticeable to ourselves) of what those assumptions are. In other words, the ways in which we deal with each other usually communicate something about the way in which we feel about other people's ability and reliability. These assumptions of ours are more likely to be communicated by gestures, expressions, tones of voice and other subtle cues than by the actual words we use.

For example, if we are working with a person who we feel does not fully understand the requirements of his job, and who does not appear to take his responsibilities very seriously, we will try to communicate with him in a way that compensates for these presumed "deficiencies" of his. In such a case, the instructions we give may be rather more detailed, and our checking on his performance rather more frequent, than would otherwise be the case. According to McGregor, the implication of these nuances in our behavior (namely, that we don't entirely trust the individual) are usually clear enough to the individual to affect his behavior. But instead of making him more effective and responsible, the opposite effect is likely to occur because our behavior is really a demand for compliance and provides little opportunity for <u>learning</u> to be effective on the job or for <u>developing</u> a sense of personal responsibility.

In other words, our assumptions about people often lead to what McGregor called a "self-fulfilling prophecy", in which our own behavior prevents other people from behaving toward us in ways that are inconsistent with our assumptions about them. According to McGregor, this phenomenon leads to a wholesale waste of talent, because human potentialities are not given an adequate chance to develop on the job.

The distinction between the abilities which people have <u>already</u> developed, and their potentiality for <u>further</u> development, is one of the major differences between Theory X and Theory Y. Basically, McGregor was trying to describe two contrasting approaches to the problem of influencing other people's behavior.

Approved For Release 2003/05/27 : CIA-RDP84-00780R005000020039-5

Theory X is a rather common set of assumptions which is more concerned with behavior that can be readily observed than with potentialities for developing more effective forms of behavior. Theory Y, which is less consistent with traditional ideas about influence, and therefore probably less common than Theory X, is less impressed by readily observable behavior than by potentialities for growth and development through learning.

Theory X, in other words, regards human capacities as static, unimprovable, and for the most part not very impressive. It follows from this that if productive work is going to be accomplished at all, some means must be found to compensate for prevalent human deficiencies such as poor judgment, passivity, and irresponsibility. Two basic strategies emerge from Theory X: one involves compensating for human deficiencies by coercing people into behaving as they should by means of threats, punishments, discipline and surveillance; the other involves coaxing them to do what they should by means of rewards, praise, permissiveness and blandishments.

Although these two approaches are superficially quite different they are based on essentially the same underlying assumption, namely that productive work is an unnatural form of behavior for most men, and that some kind of pressure must be applied in order to obtain productive work from them. Generally speaking, the coercive approach stimulates resistance, apathy and deliberate restriction of output, while the coaxing approach stimulates a casual sense of responsibility for production and only sporadic commitments of talent and effort.

As Richard Beckhard points out in the films, neither of these two variations of Theory X is likely to lead to sustained high levels of productivity. Further, the "coaxing" approach, which is sometimes mistaken for what McGregor meant by Theory Y, may lead to comfortable relationships between managers and subordinates but is unlikely to tap latent reserves of energy and creativity. The basic defect with both of these variations on Theory X is that they do not recognize, and hence cannot stimulate, the natural human tendency to develop talent and responsibility to progressively higher levels.

Theory Y has sometimes been misinterpreted as suggesting that if everyone is left to his own devices, he will tend to become more productive than if he is firmly led. Actually, McGregor's position was that under the right conditions, many people (not necessarily all) could find sufficient satisfaction in work to devote more effort to it than they would in response to coercion or coaxing only. In other words, if the work itself was so structured as to provide opportunities for a sense of achievement and personal growth, these experiences would provide a more powerful motivation for continued effort than any externally applied "motivation." In this sense, McGregor's Theory Y anticipated much of the current emphasis on job enrichment.

However, McGregor stressed that these changes could not be easily accomplished, because what was involved was not so much a change in managerial tactics as in managerial assumptions. That is, the necessary conditions for developing human potentials were unlikely to be created unless managers understood and believed the basic assumptions of Theory Y (namely, that judgment and responsibility could be developed even in persons whose behavior did not suggest such capacities currently, and that an atmosphere of tolerance and trust was the best setting for such a development to occur).

As Richard Beckhard points out in the film, the question of how such trust can be developed has too often been approached from the standpoint of, "What specific action program should we follow in order to develop trust?" Actually, the best way to develop trust is to undertake a collaborative effort in which mutual support is necessary for success. Similarly, the best way to establish whether Theory Y assumptions apply to any given individual is to make them about him, and treat him as if he were at least potentially a highly motivated, responsible, achieving person.

In other words, Theory Y involves risks. It is essentially an invitation to explore the limits of human capacities, rather than accepting them as unchangeable; and it is also, as McGregor put it, "an invitation to innovation" in the sense that specific ways of treating individuals on the basis of these assumptions have to be worked out individually, based on both the person and the job.

John Paul Jones recounts some of the more sophisticated applications of McGregor's basic ideas to management development and the resolution of managerial problems which were due more to a failure of collaboration than to technical deficiencies. As Jones points out, McGregor felt that where conflict existed, a candid confrontation was more likely to remove the roadblock than a passive acceptance of the situation. Here, as in Theory Y, McGregor was much more concerned with organizational effectiveness than with avoiding temporary discomfort or stress.

In fact, a close reading of McGregor reveals him to be considerably more tough-minded, results-oriented, and realistic than many managers who subscribe to what is essentially a Theory X approach. The main difference between them lies in their beliefs about the realities of human nature. McGregor, a life-long student of behavioral science and a man who was intimately acquainted with high-level executive problems, clearly felt that the realities of human nature were considerably more complex and fluid than traditional managerial thinking had supposed.

HUMAN NATURE AND ORGANIZATIONAL REALITIES

CHRIS ARGYRIS: BIOGRAPHY

Chris Argyris is Beach Professor of Administration Sciences, Director of Research on Problems of Individual-Organizational Health, and Fellow, Jonathan Edwards College, Yale University. He is consultant to many industrial and business organizations, as well as numerous governmental agencies in the United States and England, Norway, Sweden, Holland, France, Italy, Greece and Germany. He is author of more than 100 articles and 13 books, including such major publications as ORGANIZATION AND INNOVATION, 1965; INTEGRATING THE INDIVIDUAL AND THE ORGANIZATION, 1964; INTERPERSONAL COMPETENCE AND ORGANIZATIONAL EFFECTIVENESS, 1962.

SUMMARY OF FILM

1. The problems of worker apathy and lack of effort are not, according to Argyris, simply a matter of individual laziness. Rather they are often healthy reactions by normal people to an unhealthy environment created by common management policies. More specifically, Argyris states that most adults are motivated to be responsible, self-reliant and independent. These motives are acquired during childhood from the educational system, the family, and communications media such as books, television and radio. But the typical organization confines most of its employees to roles that provide little opportunity for responsibility, self-reliance or independence. On the contrary, too many jobs are designed in ways that make minimal demands on the individual's abilities, and that place the responsibility for major decisions not in his hands but in his supervisor's.

In effect, such jobs create a child-like role for the employee and frustrate his normal motivations for a more adult role. Argyris says that the common reaction of withdrawing one's interest from the job--treating it with indifference or even with a certain degree of contempt--is a necessary defensive maneuver that helps the individual to preserve his self-respect. Unfortunately, the cost of these reactions to the organization is heavy: minimal output, low quality, and excessive waste.

2. According to Argyris, both labor unions and management have missed the main point with regard to employee motivation. They have concentrated largely on matters related to income: job security, pay and "fringe" benefits. These are necessary, but in themselves insufficient, conditions for effective motivation. Argyris feels that the battle for adequate employee incomes was fought and won long ago. Today the real frustration of most employees is not so much a matter of income as of utilizing their abilities in a significant way. They need, in other words, a sense of pride and accomplishment from their work; but instead of this, they find their work neither stimulating nor dignifying.

So for the typical employee, work tends to become a "necessary evil" rather than a source of personal satisfaction. This is why Argyris feels that the psychological importance of income is changing for many workers: they no longer regard it chiefly as a means of elevating their standards of living. Instead, it has taken on some of the characteristics of a penalty payment: a "fine" that they can periodically levy against their employers to compensate them for the lack of satisfaction in their work. Since the external symptom of this smoldering resentment is a continual demand for income improvement, both management and labor tend to be blinded to its underlying causes. But both are also under pressure to match income improvements to productivity improvements. Argyris says that the potential contribution of motivation to increased productivity is largely neglected in negotiations over income, since these deal only with the symptom and do not address themselves to the underlying cause.

3. Argyris has experimented with various techniques to improve employee motivation. In the film he describes one of these experiments: a revision of work-flow in a factory. Assemblers were made responsible for the entire final product, instead of for only a few parts. Such changes make the employees' work more complex and place a much heavier burden of responsibility upon them. After an initial adjustment period during which productivity temporarily decreases, normal output levels are re-attained and sometimes exceeded. The motivational change in these experiments is revealed by a much lower rejection rate, reflecting greater care on the part of the employees, and by lower costs, as well.

Argyris notes that such programs must be undertaken selectively, since not every employee wants to accept more responsibility, or is prepared to carry the added burden of worry that responsibility inevitably brings. Nevertheless, he asserts that the number of employees who can be successfully motivated by upgrading their responsibilities is much larger than most managers would suspect.

4. Argyris makes a clear distinction between "happiness" and "motivation". A happy employee is not necessarily motivated to work more effectively, and an employee who is motivated to be more productive is not necessarily happy. The idea that behavioral scientists advocate making employees "happy" as an end in itself is a misconception. If anything, the superficial signs of employee moods are less positive among employees whose responsibilities have been upgraded. There is less joking and light conversation, more preoccupation with the job and worry about factors that may affect their output, such as parts deliveries.

In a larger sense, however, there is little question but that successfully motivated employees derive a greater sense of personal value and significance from their work than employees who are not effectively motivated. Their job becomes the central focus of their efforts, imagination and ambitions--not just a "necessary evil"--because that is where they experience their major satisfactions.

5. Argyris has also examined some of the problems encountered by managers in their work. In particular, he is concerned with "built-in inefficiencies" in the decision-making process that can affect the operations of entire organizations. Argyris traces these difficulties to the nature of interpersonal relationships--that is, the characteristic ways of perceiving each other and of dealing with each other--among managers. After observing hundreds of management meetings in a variety of companies and organizations, Argyris concludes that many managers inadvertently "filter" the information they are given by others. He also concludes that many managers have difficulty in telling each other what is really on their minds ("leveling" with each other).

These and other difficulties in the communications process result in wasted time, delayed reactions and ineffective decisions. This lack of "interpersonal competence" is by no means peculiar to

managers--other groups have the same problem--but its consequences for the organization as a whole are much more severe in the case of managers than they are for other groups.

6. One method that has been developed for trying to improve interpersonal competence is "laboratory training", which is also known as "sensitivity training" or "T-group training". The basic strategy of a T-group is to place people in a unique situation which can facilitate openness and risk-taking, while minimizing defensiveness and mistrust. In other words, the T-group attempts to provide an opportunity for behaving in a manner which makes communication much more precise and much less subject to barriers or filters. The more experience an individual has in dealing with others in this way, the more likely he is to be able to transfer some of these skills to the ordinary work situations he confronts daily.

To provide this unique atmosphere, the T-group deliberately dispenses with the usual "props" that define status and therefore tend to inhibit free communication. The sessions are very informal, with no chairmen and not even an agenda. The group discovers, usually to its surprise and discomfiture, that it is difficult for it to accomplish much without having a rigid framework that gives everyone a more or less "pre-determined" role to play. It is in the course of coping with this dilemma that the members of a T-group begin to learn from each other about the impact that their tactics have on other people, how they themselves are perceived, and what happens to the "messages" that they try to send to other people.

Argyris notes that T-group training is not a panacea for managerial problems, and that there are certain groups or individuals for whom he would not recommend it. The results of this training have been important but not dramatic. In the case of groups whose members did not work in the same organizations, there is evidence that T-group training helps to make a man a better listener. That is, he learns more from what people tell him, and more quickly, than he could before the training. In the case of groups whose members are part of an actual working team, decisions are reached faster, and prove to be more effective, than the decisions the same group was able to make prior to the training.

THE MANAGEMENT OF HUMAN ASSETS

RENSIS LIKERT: BIOGRAPHY

Dr. Likert is the Director of the Institute for Social Research and a Professor in both the Psychology and Sociology departments at The University of Michigan. He is a past president of the American Statistical Association and has served on the Board of Directors and the Policy and Planning Board of the American Psychological Association. Dr. Likert's personal research interests in recent years have focused on the study of organizational theory and management practice. This work forms the basis of his most recent books: NEW PATTERNS OF MANAGEMENT, 1961; and THE HUMAN ORGANIZATION: ITS MANAGEMENT AND VALUE, 1967.

SUMMARY OF FILM

1. When an organization is faced with the need to conserve cash, the most common reaction is to cut expenses and "tighten up" operations. Hierarchical pressure from the top is transmitted through the management ranks into every department to work harder and spend less. When the results are measured by ordinary accounting procedures, they usually show that more cash is being generated than before. The usual interpretation given to such figures is that management has made the organization profitable again.

Likert, whose Institute has conducted behavioral research studies in hundreds of organizations, disagrees with that interpretation. He points out that cash is not necessarily profit. Cash can also be generated by liquidating assets, and that is exactly what happens in many cost-cutting programs. Traditional accounting fails to measure what happens to an organization's human assets: that is, the skills, experience, loyalty, and know-how of its employees. If these are damaged, the organization may show more cash on its balance sheet, but it will be less capable of operating efficiently than before. The result, according to Likert, is the same as failing to keep plants or machinery in good operating condition: a short-term gain has been bought at the cost of long-term earning power.

Likert's studies show that when cost-cutting is applied insensitively--that is, when management adopts a tough, take-it-or-leave-it attitude--the reaction is likely to run through three phases. First, employees become resentful, hostile and distrustful toward management. Second, as a result of these attitudes, employees are likely to submit many more grievances than usual, work carelessly and wastefully, restrict production, and even leave the organization to find employment elsewhere. The latter is most likely to occur with the more able engineers and managers and the most highly skilled workers, because they are the most easily re-employed. The effect of their departure is to lower the average level of competence in the organization. Finally, the cumulative result of all these manifestations of employee resistance is greatly reduced efficiency and, in all probability, another financial crisis--that could be worse than the one the original "cost-cutting" program was intended to cure.

2. Likert has developed methods which enable the members of an organization to rate it in terms of several variables which he has found to be important. Among these are the leadership styles that are characteristic of the company, the freedom (or lack of it) which subordinates feel about communicating with their superiors, and the degree of confidence and trust which subordinates feel that their superiors have in them.

Based on the responses of an organization's members to questions such as these, Likert finds that most organizations can be given a numerical rating on a four point scale that expresses the prevailing management system. This scale runs from System 1 -- an arbitrary, coercive, highly authoritarian management style that is seldom encountered any longer in its "pure form" -- through System 4 -- which is based on teamwork, mutual confidence and trust, and a genuine respect for the individuals who comprise the organization. System 4 in its "pure form" is also relatively rare. Systems 2 and 3 are intermediate stages. The Likert technique also permits finer gradations between Systems 2 and 3, etc.

One of Likert's more significant findings is that the more closely a company's management style approximates System 4, the more likely it is to have a record of sustained high productivity, good labor relations, and high profitability. Similarly, the more closely an organization approximates System 1, the more likely

it is to be inefficient and to suffer from recurrent financial crises. These same relationships also hold for shifts in the management system being used if the entire assets of the firm are taken into consideration. That is, shifts in the management system toward System 4 result in improving performance; shifts toward System 1 yield poorer results. These findings have been repeated in so many different studies that Likert states flatly that a general principle of effective management has been demonstrated. The future, according to Likert, belongs to organizations that are practicing, or can convert to, a management style approximating System 4.

3. One of the reasons why the superiority of System 4 is not always readily apparent is the time factor. System 1 management (typified by the coercive cost-cutting approach) produces short-term gains (in cash, not profit) quickly; and its long-term disadvantages become apparent only slowly. On the other hand, shift in management style toward System 4 does not, as a rule, produce rapid increases in cash income. Total true earnings become greater because of the increased value of the human organization but profitability in the form of current cash does not -- at least not immediately. In fact, it may even become worse before it becomes better. But System 4 builds steadily toward a flexible, responsible team that can achieve and maintain high profitability.

Moreover, System 4 can in emergencies cut costs and improve productivity readily by cooperative, concerted effort. Likert finds that the management style of a firm and the motivations and attitudes of the employees are "leading variables"; that is, they change before profitability changes. Management style has a greater lead time relative to profitability than do measurements of employee motivations and attitudes. It is also a leading variable with regard to changes in employee motivations. For this reason measurements of the management style and attitudes and motivations can be a useful barometer: a sort of forecast of whether the productive power of a company's human assets are likely to increase or decrease. Likert feels that a realistic accounting of an organization's total capability to continue earning a return on its investment requires measurements of management style and attitudes and motivations, as well as standard financial measurements.

In order to harness the productive power of human assets, instead of having continually to struggle to keep them under control, System 4 relies on three basic principles: The first is to utilize modern principles and techniques of motivation, rather than relying on the traditional combination of rewards and threats. A key to doing this is to apply fully the "principle of supportive relationships", which is basically a matter of dealing with people in ways that maintain or enhance their feelings of self-worth in terms of their needs, desire and values. The second principle is to build an organization of tightly-knit, highly motivated work groups committed to achieving the objectives of the organization. These groups are linked together to form the overall organization by persons who hold overlapping memberships in two groups. The third principle, according to Likert, derives from the principle of supportive relationships: management holds high performance goals for itself and for all employees, and makes it clear that it expects them to be met. In other words, setting high goals for efficiency and productivity can be attained best by a system of management that is geared to satisfy real human needs. In addition, the usual conditions required for successful operation need to be present, such as adequate technical competence on the part of managers.

Background Information on Gellerman Series:

"EFFECTIVE ORGANIZATION"

THE GELLERMAN EFFECTIVE ORGANIZATION FILM SERIES

Building on the widely acclaimed Gellerman Motivation and Productivity Series, BNA FILMS has once again captured the ideas of a group of leading behavioral scientists. Whereas the first series featured leading authorities from the universities, the new series deals with the applications of behavioral science practitioners in different organizational settings.

Featured "guest stars" are Sheldon Davis, Vice President and Director of Industrial Relations of the Systems Group of TRW, Inc., Dr. Alfred Marrow, Chairman of the Board of the Harwood Companies, Emanual Kay, Dr. Gellerman's partner, Douglas Bray, Director of Personnel Research at A. T. &T., and Scott Myers, industrial psychologist and consultant.

FILM 1
ASSESSING MANAGEMENT POTENTIAL
with Douglas Bray

Drawing on more than 15 years' experience in early identification of management potential at A. T. &T., Doug Bray emphasizes why every organization should have a systematic management progression program. Without it, he says, promising youngsters get stuck in narrow departmental channels of promotion; are required to pass through sometimes needless job sequences because of an over-emphasis on specific job knowledge; and must rely on the "good conduct report" of their immediate superior for any chance at promotion.

Bray describes "management assessment center" techniques, which he pioneered. Candidates from different parts of the organization participate in various simulation games and exercises. Each candidate's performance is appraised by trained assessors, insuring impartial judgment of his management potential.

Two dramatized cases highlight the film. In one, a division manager faces a crisis because of a heart attack suffered by his chief accountant. A newcomer to the division, the manager is amazed to find that no plans have been made for such emergencies, and he must rely on the unsubstantiated opinions of the comptroller to pick a successor. The second case shows how an assessor skillfully conveys to a young man, who has just completed his stint at an assessment center, the fact that he is not qualified to be considered for promotion to management ranks. A classic example of the right way to convey "negative information," this case could be the model for many types of manager-subordinate interviews.

The film, in general, is of value in pointing up problems relating to managerial succession, promotion policy and practice, managerial selection techniques, career counseling, and the like.

FILM 2
MANAGEMENT BY PARTICIPATION
with Alfred Marrow

Probably the only Board Chairman of a large company who also has a Ph. D. in Psychology, Alfred Marrow has fostered the application of behavioral science research in his companies for more than 25 years. And he has impressive records of concrete results in terms of both employee satisfaction and company earnings. Marrow describes how the now classic participation techniques got started and how they work out in practice, noting pitfalls as well as opportunities along the way.

Filmed in the Marion, Virginia plant of the Harwood Company, where much of this research took place, three dramatic vignettes highlight the change in supervisors' and employees' attitudes as they gradually accept the idea of participation. Skilled professional actors re-create "real-life" experiences as plant management and staff overcome skepticism and new concepts of responsibility -- both of supervisors and employees -- come into being.

A valuable film to treat issues such as organizational climate, leadership style, participation vs. "permissiveness," group involvement in problem solving and altering managerial and employee attitudes toward new management practices.

FILM 3

PAY FOR PERFORMANCE

with Emanual Kay

What are more progressive companies doing to insure maximum advantages from the salaries and wages they are paying? How can they at least avoid the negative effect of poorly-known, poorly-understood pay policies which employees consider inequitable? Manny Kay tackles these difficult questions, aided by a real-life drama which is reproduced every day in countless dining rooms throughout the country: wife badgering husband to "be a man" and ask for a raise. When the wife asks: "How do they decide who gets raises at that stinking company?" the husband has to admit: "I don't know."

The second part of this film deals with goal-setting, which is rapidly replacing traditional performance appraisal programs at many companies. Instead of acting as judge, and the subordinate as defendant, the supervisor in the goal-setting process works out with each employee mutually agreed-on objectives and time limits for achieving them. Kay provides several examples of goal-setting in practice, including one dramatized episode showing a salesman and his sales manager "feeling their way" through their first goal-setting session.

A highly useful film in a highly neglected area -- i.e., pay, performance, appraisal, motivation and morale.

FILM 4
TEAM BUILDING
with Sheldon Davis

It is a well-known fact that we judge ourselves by our intentions, and we judge other people by their actions. In team-building, people whose jobs are inter-related try to explain their own actions and understand other persons' intentions. As Shel Davis of TRW Systems, defines it, team-building is a conscious effort of people in the work-group to improve their effectiveness in working together. In team-building sessions, the people involved "level" with each other, not to probe into each others' minds, but to understand job-related behavior. Sessions end with concrete agreement on future action items, which can be tested and evaluated. The next step is inter-group sessions, where teams that have to work together -- line and staff, accounting and engineering, etc. -- "level" with each other on the problems between them which cause conflict.

In the dramatic case which illustrates this discussion, the manager of an advertising department of a large corporation, and his two principal assistants, discuss team-building with a personnel specialist. The two assistants -- a man and a woman -- bicker and put each other down, but they and their boss are united in resisting any attempt to get them into team-building sessions. How the personnel specialist gets them to change their minds is the subject of the case.

FILM 5
CONFRONTING CONFLICT
(A Team-Building Demonstration Session with Sheldon Davis)

Taking off from the case in the previous film, the three top people in the advertising department embark on their first team-building session, with Sheldon Davis acting as the professional consultant. Although considerably edited from the original version of this extemporaneous session, which lasted three hours in front of the cameras, viewers of this film can get a real understanding of team building as it is actually practiced -- so when they try it themselves they will have the feeling of having "been there before."

Shel Davis' "to camera" comments help the viewer see the conflict through the eyes of an impartial observer; at the same time getting a deeper appreciation for the reasons for success and failure in this type of confrontation. There is no better way of becoming thoroughly acquainted with this technique which may well be the way all management people will solve their future "people" problems.

BIOGRAPHIES

SAUL W. GELLERMAN

The producer of this film series is Saul W. Gellerman. He is President, Gellerman Kay Corporation, with offices in Harrington Park, N. J. and Marblehead, Mass. He previously served IBM Corp. in various behavioral research and management capacities, 1959-1967, most recently as Executive Research Consultant. He authored Motivation and Productivity (1963) and Management by Motivation (1968) for the American Management Association and has also written Management of Human Relations (1966) and People, Problems and Profits (1960). He also produced the Motivation and Productivity Film Series for BNA Films, Inc. His Ph. D. is from the University of Pennsylvania.

DOUGLAS W. BRAY

Douglas W. Bray is Director of Personnel Research at American Telephone and Telegraph Company, having served in other personnel research capacities with his company since 1956. Along with William C. Byham, he has developed materials used in assessment centers for the early identification of management potential. Through his efforts the assessment center program has been extended throughout AT&T. He is Chairman of the American Psychological Association Committee on the Practice of Psychology in Industry, and Fellow, American Psychological Association, Division of Industrial Psychology, and Division of Personality and Social Psychology. He is the author of numerous articles on the national supply of talent, vocational and educational guidance, and personnel testing and assessment. He has written Issues in the Study of Talent and co-authored Effecting Change in Large Organizations, The Uneducated, and The Ineffective Soldier. He holds a Ph. D. from Yale in Psychology.

ALFRED MARROW

Alfred J. Marrow is Director of Research and Chairman of the Board, Harwood Companies, Inc. One of the very few business executives with a Ph. D. in Psychology, he has been especially active in the application of behavioral science knowledge to practical business problems. He is the author of eight widely-read books published in ten languages and over 75 articles, has been guest lecturer at more than forty universities, and serves as board member, or chairman, of ten research institutes and universities. His work in the applied fields includes appointments by former Mayor Wagner of New York as City Commissioner of Human Rights; and by former Secretary of State Dean Rusk as Advisor to the Department of State. He is also President, American Board of Professional Psychology which conducts exams and grants diplomas to superior practicioners in clinical, counseling, school industrial and organization psychology in the U. S. and Canada. He is the holder of the Kurt Lewin Award, the highest honor in the field of social psychology.

EMANUEL KAY

Emanuel Kay is Vice President, Gellerman Kay Corporation. Previously, he served General Electric Company in various behavioral research and management capacities (1958-69), most recently as a divisional Employee Relations Manager. While at G. E. he was Field Director, Performance Appraisal Study, and co-authored, "Split Roles in Performance Appraisal," Harvard Business Review, 1965. Two of his articles have appeared in Innovation: "How Good Is He?" (June 1969), an analysis of performance appraisal; and "Work Needn't Turn People Off," an examination of mid-career problems (September 1971). He has taught at M. I. T. (Sloan School of Management) and Carnegie Mellon University. His Ph. D. is from Carnegie Mellon University.

SHELDON A. DAVIS

Sheldon A. Davis is vice president (since 1968) and Director of Industrial Relations (since 1965) of the Systems Group of TRW Inc., Redondo Beach, California, an aerospace company.

He is responsible for the personnel management functions for the Systems Group's more than 10,000 employees in 36 locations throughout the U.S. and in three foreign countries. He has served in a variety of industrial relations and administrative positions since joining TRW in 1956, and is a member of the TRW Inc. Personnel Policy Planning Group.

A frequent university guest lecturer, he earned a M.B.A. from Harvard Graduate School in 1952 after graduating cum laude from the Boston University School of Public Relations. He has served as a member of a Visiting Committee to the Doctoral Program in Behavioral Science at Case Western University, a consultant to the State Department, and a member of the Organization Development Advisory Council of the National Association of Manufacturers. He currently is a Fellow of the National Training Laboratories Institute for Applied Behavioral Science and is a visiting staff member to numerous UCLA programs, including the Learning Community in Organization Development in the Graduate School of Business Administration. He has authored several articles on organization change.